

CLAIMS

What is claimed is:

1. A method of fabricating a solar cell, the method comprising:
 - forming an ink pattern on a first layer, the ink pattern comprising an ink that is substantially devoid of particles that can scratch a surface of the first layer;
 - and
 - etching the first layer using the ink pattern as a mask.
2. The method of claim 1 wherein the ink is substantially devoid of silicon dioxide.
- 10 3. The method of claim 2 wherein the first layer comprises an oxide layer.
4. The method of claim 1 wherein the ink pattern is formed by screen printing.
5. The method of claim 1 wherein the etching of the first layer exposes a silicon material.
6. The method of claim 1 wherein the solar cell is a backside-contact solar cell.
- 15 7. The method of claim 1 further comprising:
 - removing the ink pattern off the first layer; and
 - performing an etch of a silicon material.
8. The method of claim 7 wherein the first layer comprises an oxide layer and
- 20 the ink is substantially devoid of silicon dioxide.

9. A method of fabricating a solar cell, the method comprising:
 - forming an oxide layer over a silicon material;
 - screen printing an ink pattern over the oxide layer, the ink pattern comprising an ink that is substantially free of particles that can scratch a surface of the oxide layer; and
 - 5 etching portions of the oxide layer not covered by the ink pattern.
10. The method of claim 9 wherein the ink is substantially free of silicon dioxide particles.
11. The method of claim 9 wherein the oxide layer comprises thermally grown
10 oxide.
12. The method of claim 9 further comprising:
 - removing the ink pattern; and
 - etching portions of a silicon layer exposed by the etching of the oxide layer.
13. The method of claim 9 wherein the solar cell is a backside-contact solar
15 cell.
14. A method of manufacturing a solar cell, the method comprising:
 - printing an ink pattern over a first layer, the ink pattern comprising an ink that is substantially devoid of particles that can scratch a surface of the first layer; and
 - 20 etching portions of the first layer not covered by the ink pattern.

15. The method of claim 14 wherein the ink is substantially devoid of silicon dioxide particles.

16. The method of claim 14 wherein the first layer comprises an oxide layer.

17. The method of claim 14 further comprising:

5 stripping off the ink pattern; and
 etching a silicon material.

18. The method of claim 14 wherein the printing of the ink pattern is by screen printing.

19. The method of claim 14 wherein the first layer comprises an oxide layer
10 and the etching of the first layer exposes a silicon material.

20. The method of claim 14 wherein the solar cell is a backside-contact solar cell.

21. A method of forming a protective coating over a solar cell material, the
method comprising:

15 forming an ink pattern on a layer of a solar cell, the ink pattern comprising
 an ink that is substantially devoid of particles that can scratch a surface of the
 layer; and

 performing a processing step on the solar cell using the ink pattern as a
 mask.

22. The method of claim 21 wherein the processing step comprises etching of a material of the solar cell.

23. The method of claim 21 wherein the processing step comprises deposition of a material on the solar cell.

5 24. The method of claim 21 wherein the layer comprises an oxide layer.

25. The method of claim 21 wherein the ink pattern is formed by screen printing.